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# ILLINOIS COUNCIL ON FOOD AND AGRICULTURAL RESEARCH

Strengthening Illinois' economy and families...  
from Chicago to Cairo

# C-FAR

The Illinois Council on Food and Agricultural Research (C-FAR) is a statewide partnership organized to support relevant, high-quality research and related outreach programs for Illinois' food, agricultural, and related systems. C-FAR was founded in December 1993 as a nonprofit association to foster research that strengthens Illinois' leading industry and enhances the health and welfare of all Illinois citizens.

## C-FAR RESEARCH REACHING ALL ILLINOIS CITIZENS

C-FAR research, funded by the State of Illinois, has had an immensely positive impact on the quality of life for citizens of Illinois and the state's economy since the first C-FAR appropriation in fiscal year 1996. These research investments are unique in that they are guided by Illinois citizens, via the C-FAR membership, to ensure that the state's most critical research needs are met. The following are just a few examples of C-FAR-funded research outcomes that either have been commercialized or have otherwise positively affected the people of Illinois.



## Food safety programs prevent foodborne illness in Illinois



Hazard Analysis Critical Control Point (HACCP) training programs, food safety curricula, and public service announcements continue to educate food service personnel and the general public on safe food handling. More than 1,000 Illinois food service professionals and 150 local environmental health specialists have been trained in HACCP procedures. HACCP programs have also been developed for small meat-

processing facilities and farms. Daycare centers, school meal programs, university-dining services, long-term care facilities, hospitals, restaurants, catering, deli operations, and correctional systems are currently participating in the implementation of HACCP programs.

## Partnerships provide high-quality Illinois meat products to consumers

New marketing resources and networks are helping Illinois livestock producers to better meet consumer demand by providing a greater selection of meat products. One example is the Premium Beef Project, which is linking independent Chicago grocers with downstate beef producers. These grocers are able to better serve their customers by providing high quality, locally produced beef products.



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## Over 43,000 students learn the importance of food safety

*Food Safety: It's A Life Science* is a program developed for elementary students, coordinated with state learning goals, that focuses on the importance of food safety. Over 43,000 students in 1,400 4th through 6th grade classrooms located in and around Chicago participated in this program, which helped the students learn

to apply food safety concepts and information to their everyday lives while learning language, mathematical, and analytical skills.



## Native perennials identified as alternative crops for Illinois nurseries



Consumer interest in use of native plants for landscaping has increased in recent years, offering a new marketing niche for Illinois' green industry. Six flowering perennial plants native to Illinois with significant market potential for Illinois' nurseries have been identified. They include wood mint, purple prairie clover, Bradbury beebalm, spotted horsemint or beebalm, wild bergamot or horsemint, and royal catchfly. These attractive plants were selected based on their overall quality coupled with their ease of production.

## Millions of consumers learn about better food choices

Comprehensive Web-based information systems have been developed, and they are assisting Illinois consumers and producers. The Nutrition Analysis Tool at [www.nat.uiuc.edu](http://www.nat.uiuc.edu) helps Illinois citizens make more informed food choices. The website receives over one million hits per month.



## Food safety technology reaches commercialization

A fast, inexpensive, and reliable bacteria detection system has been developed to test for potentially dangerous pathogens in food such as *Salmonella*, *Listeria*, *E. coli*, and *Campylobacter*. The Centers for Disease Control and Prevention estimates that foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States each year—and Illinois has ranked among the top three states in the number of foodborne illness outbreaks.

## Soy foods center promotes increased health

The Illinois Center for Soy Foods promotes the consumption of soy foods, thereby providing benefits to soybean growers, processors, and consumers in Illinois. The center addresses: soy product development, soy consumer acceptance, soy processing technology transfer, and soy education and outreach. A high-energy, nutrient-dense nutrition



bar has been developed and is intended to be used around the world as a “first response” food during crises caused by natural disasters or warfare.

## Non-thermal food processing technique commercialized

A nonthermal microbial inactivation technique using high-pressure processing was developed and is now being used commercially. The first two high-pressure-processed products (guacamole and oysters) are now available in the U.S. market.



## Research provides scientific basis for water quality standards



The Illinois Environmental Protection Agency developed a plan to adopt water-quality standards for nutrient-related parameters that protect against measurable impacts to the aquatic environment that can be caused by nutrient over-enrichment. The plan states the utilization of C-FAR-funded research as a scientific basis for criteria development. This plan was approved by the U.S. Environmental Protection Agency.

## Web-based resource management mapping system

The Resource Management Mapping Service (RMMS) was developed to improve the protection and management of Illinois' natural resources. Illinois watershed management groups have used this online tool extensively. Based on this system, the Army Corp of Engineers has developed the Wetland Impact Review Tool, and the Illinois Environmental Protection Agency and the Department of Natural Resources are in the process of developing additional tools.



# Urban and livestock waste-recycling techniques protect environment and yield value-added compost products

Innovative technologies are being used to recycle urban and livestock waste into value-added compost. Three new compost products have been branded and are being marketed, including *Sweet Earth*, which is approved by the Illinois EPA. An Illinois venture, Midwest Organics Recycling, received a grant through USDA Rural Development to establish a composting operation.



# Rural development initiative generates economic impact over \$150 million



A five-year initiative focused on rural community development in Illinois has resulted in a combined economic impact on sales, payroll, capital investment, and leveraged project dollars of over \$150 million. This includes 88 new or expanded value-added agricultural enterprises, 457 new jobs, \$18 million in new annual payroll, \$45 million in value-added sales increases, \$6 million in new capital investment, and \$3.3 million in leveraged project dollars.

# C-FAR INVESTMENT BRINGS ADDITIONAL DOLLARS TO ILLINOIS

C-FAR research investments are leveraged to attract additional dollars into Illinois' state economy. Researchers leverage C-FAR dollars to obtain roughly four times their C-FAR project funding in the form of additional funding. Often, the C-FAR appropriation serves as the seed money to begin a particular research initiative, which can lead to substantial federal, corporate, and other funding. The following are just a few examples of how C-FAR research investments are being leveraged to bring additional dollars to Illinois.

*Evaluating Corn GMOs for Safety, Equivalence, and Environmental Impact* and related projects funded at \$450,424 were leveraged to obtain **\$16.3 million** from the U.S. Department of Agriculture, the National Science Foundation, the Illinois Soybean Program Operating Board, the North Central Soybean Research Program, the United Soybean Board, the Illinois Missouri Biotechnology Alliance, the Illinois Corn Marketing Board, the Frasci Foundation, Pioneer Hi-Bred International, Inc., Monsanto, Syngenta Seeds, Garst Seed Company, Soygenetics, Land O'Lakes, Golden Harvest Seeds, and Access Plant Technology.

*Development of a Post-Menopausal Animal Model for Evaluation of Effects of Soy Isoflavones on Mammary Tumor Growth* and related projects funded at \$419,340 were leveraged to obtain **\$10.4 million** from the National Institutes of Health and U.S. Department of Defense.

*Research and Discovery Program to Abate the Threats and Harness the Potential of Atmospheric Change to Benefit Illinois* funded at \$1.9 million was leveraged to obtain **\$4.1 million** from the U.S. Department of Energy, the U.S. Department of Agriculture, the National Science Foundation, Archer Daniels Midland, Pioneer Hi-Bred, BASF International, Argonne National Laboratory, and Brookhaven National Laboratory.

*Broccoli and Health* and other projects funded at \$342,000 were leveraged to obtain a **\$2.5 million** grant from the U.S. Department of Agriculture.

*Harnessing the Benefits of an Apple Scab Resistance Gene* funded at \$104,400 was leveraged to obtain a **\$1.65 million** grant from the National Science Foundation.

*The Post-Antibiotic Era of Food Production* funded at \$90,000 was leveraged to obtain a **\$1.35 million** grant from the National Institutes of Health.

*Decision Support for Watershed Management and Planning* funded at \$21,000 was leveraged to obtain **\$718,000** from the U.S. Department of Agriculture and the U.S. Environmental Protection Agency.

*Soy and Osteoporosis* funded at \$173,122 was leveraged to obtain a **\$482,339** grant from the National Institutes of Health.

*Control of the Growth of the Foodborne Pathogen *Listeria monocytogenes** funded at \$190,470 was leveraged to obtain **\$478,000** from the U.S. Department of Agriculture.

*Dietary Protein & Exercise Are Keys to Body Weight, Fat, & Blood Lipids* funded at \$86,000 was leveraged to obtain **\$263,000** from the National Cattlemen's Beef Association and Kraft Foods.

*The Enhanced Child Development Laboratory Research Database Program* funded at \$87,000 was leveraged to obtain **\$245,644** from the National Science Foundation.



# C-FAR MEMBERSHIP

## Organizational Members\*

Association of Illinois Soil and Water  
Conservation Districts

Audubon Council of Illinois

Central Illinois Golf Course  
Superintendents Association

Champaign County Farm Bureau  
Dairy Management Inc.

DuPage County Farm Bureau  
GROWMARK

Hancock County Farm Bureau  
Horseradish Growers of Illinois

Illinois Agri-Women

Illinois Association of Drainage  
Districts

Illinois Association of Meat Processors  
Illinois Beef Association, Checkoff  
Division

Illinois Beef Association, Dues Division

Illinois Corn Growers Association

Illinois Corn Marketing Board

Illinois Dietetic Association

Illinois Farm Bureau

Illinois Farm Business Farm  
Management Association

Illinois Farm Credit Services

Illinois Farmers Union

Illinois Fertilizer and Chemical  
Association

Illinois Forage and Grassland Council

Illinois Grape Growers & Vintners  
Association

Illinois Lamb and Wool Producers

Illinois Landscape Contractors  
Association

Illinois Milk Producers Association

Illinois Nurserymen's Association

Illinois Pork Producers Association

Illinois Pork Producers Association,  
Checkoff Division

Illinois Restaurant Association

Illinois Seed Trade Association

Illinois Society of Professional Farm  
Managers & Rural Appraisers

Illinois Soil Testing Association

Illinois Soybean Association

Illinois Soybean Program Operating  
Board

Illinois Specialty Growers Association

Illinois State Grange

Illinois State Horticultural Society

ISU Agriculture Alumni Association

Illinois State Veterinary Medical  
Association

Illinois Stewardship Alliance

Illinois Sustainable Agriculture Society

Illinois Turfgrass Foundation

Illinois Wheat Association

Institute of Food Technologists,  
Chicago Section

Kane County Farm Bureau

Kankakee County Farm Bureau

Knox County Farm Bureau

Madison County Farm Bureau

Mason County Farm Bureau

Mercer County Farm Bureau

Midwest Association of Golf Course  
Superintendents

Midwest Dairy Association

Orr Agricultural Research Center

Rural Partners

Sod Growers Association of Mid-America

SIU College of Agricultural Sciences  
Alumni Society

The Chicago Farmers

UIUC College of Agricultural,  
Consumer and Environmental  
Sciences Alumni Association

UIUC College of Veterinary Medicine  
Alumni Association

Warren-Henderson Farm Bureau

# C-FAR MEMBERSHIP (*CONTINUED*)

## Affiliate Members\*

Central Illinois Agricultural Research Farms  
Environmentally Correct Concepts  
Greene Farm Management Services  
Illinois Crop Improvement Association  
Illinois Department of Natural Resources  
Illinois Finance Authority  
Illinois Forestry Development Council  
Illinois State Geological Survey  
ISU Department of Agriculture  
Illinois State Water Survey  
Lake Vermilion Water Quality Coalition  
National Center for Food Safety and Technology  
Sangamon County Soil and Water Conservation District  
Shawnee Community College  
SIUC Center of Excellence for Soybean Research, Teaching, and Outreach  
SIUC College of Agricultural Sciences  
SIUC Department of Agribusiness Economics  
SIUC Department of Animal Science, Food and Nutrition  
SIUC Department of Forestry  
SIUC Department of Plant, Soil and Agricultural Systems  
SIUC Fisheries and Illinois Aquaculture Center  
The Nature Conservancy in Illinois  
UIS Institute for Legal and Policy Studies  
UIUC College of Agricultural, Consumer and Environmental Sciences (ACES)

UIUC College of ACES, Information Technology and Communication Services  
UIUC College of Veterinary Medicine  
UIUC Department of Agricultural and Biological Engineering  
UIUC Department of Agricultural and Consumer Economics  
UIUC Department of Animal Sciences  
UIUC Department of Crop Sciences  
UIUC Department of Food Science and Human Nutrition  
UIUC Department of Human and Community Development  
UIUC Department of Natural Resources and Environmental Sciences  
UIUC Department of Veterinary Biosciences  
UIUC Department of Veterinary Clinical Medicine  
UIUC Department of Veterinary Pathobiology  
WIU Department of Agriculture  
WIU Department of Dietetics, Fashion Merchandising, and Hospitality

## Individual Members\*

In addition to all of the representatives from the above Organizational and Affiliate members, there are more than 135 Individual members who also support food, agricultural, and related research in Illinois.

\*As of February 2005





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*Rod R. Blagojevich, Governor*

*Illinois General Assembly*

*Illinois Department of Agriculture*

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